radiotherapy alone. Direct and indirect costs were derived from published peer-reviewed literature or government data. Utilities were obtained from a previously published cost-utility analysis of temozolomide and carmustine wafers in newly diagnosed glioblatoma. Univariate and threshold sensitivity analyses were conducted on all survival data, input costs, utilities, and other important parameters. **RESULTS:** The addition of temozolomide to the standard radiotherapy regimen was associated with a base-case incremental cost-effectiveness ratio of $154,933 per quality-adjusted life-year. This is considerably higher than the only other comparable estimate, which assumed the perspective of the UK National Health Service and did not include indirect costs. The model was most sensitive to the utility associated with the use of temozolomide during the maintenance phase of stable disease treatment. **CONCLUSIONS:** The base-case incremental cost-effectiveness ratio lies just beyond a willingness-to-pay threshold of $150,000 per quality-adjusted life-year. However, sensitivity analysis revealed numerous plausible scenarios that produced lower estimates. Notably, a 10% increase in the utility associated with stable disease treatment produced an estimate of $120,743 per quality-adjusted life-year. Given these results and the lack of alternative treatments for glioblastoma, we conclude that temozolomide's use in this setting is not definitively cost-effective. However, better estimates of relevant health state utilities could greatly improve cost-effectiveness models for glioblastoma treatments.

PCN79

COST EFFECTIVENESS OF HUMAN PAPILLOMAVIRUS VACCINATION FOR THE PREVENTION OF CERVICAL CANCER IN URBAN REGIONS OF CHINA

Ross KD[1], Cui L[2], Thomas DB[3]
[1]*University of Arkansas at Little Rock, Little Rock, AR, USA,* [2]*University of Washington, Seattle, WA, USA,* [3]*Fred Hutchinson Cancer Center, Seattle, WA, USA*

OBJECTIVES: To determine the costs, outcomes and level of cost-effectiveness associated with HPV vaccination in urban China. **METHODS:** A Markov model of HPV vaccination in urban China is used to follow hypothetical females from age 12 to age 92. The individuals in the model are assumed to be vaccinated at age 12 and the rates of HPV infection, squamous intraepithelial lesions, cervical cancer and death are measured on an annual basis for 80 years. All costs and outcomes are discounted. **RESULTS:** In our base case analysis, the administration of HPV vaccine could reduce cervical cancer rate by 65%. In our model, HPV vaccination is found to be cost-saving. The implementation of HPV vaccination results in an increase of 0.6 QALYs over the lifetime of each individual. The total lifetime discounted costs with vaccination are $766 dollars per individual lower than the total costs without vaccination. Under all scenarios examined in our sensitivity analysis, the total costs with vaccination are reduced when compared to current practice with an increase in QALYs as well. **CONCLUSIONS:** Compared to current practice in China, which does not include cervical cancer screening, HPV vaccination appears to be cost-saving. China has a coverage rate of 95% for its childhood immunization program. Incorporating HPV vaccination into this program could likely be done with a minimal amount of effort. Our results provide strong evidence for the implementation of HPV vaccination programs in urban China.

PCN80

ECONOMIC EVALUATION OF SUNITINIB FOR THE FIRST-LINE TREATMENT OF METASTATIC RENAL CELL CARCINOMA IN RUSSIAN FEDERATION

Yagudina R, Kulikov A, Novikov I
I.M. Sechenov First Moscow State Medical University, Moscow, Russia

OBJECTIVES: The purpose of this research was to determine the cost-effectiveness of sunitinib in terms of the RF health care system. In this research, the comparisons of costs and effectiveness with patients treated by sunitinib, IFN-α, sorafenib and bevacizumab with IFN-α were studied, based on the RF health care system conditions. **METHODS:** In this Pharmacoeconomic research the cost-effectiveness analysis (CEA) and cost-utility analysis (CUA) were studied. The results were estimated in life years before the disease progression (PfLYs) and prolonged life years (LYs) within CEA and quality-adjusted life-years (QALYs) within CUA. The results of these analyses were illustrated in incremental cost-effectiveness rate (ICER) and cost-utility rate (ICUR). The cost-utility analysis was chosen as the main analytical method, because sunitinib was supposed not only to affect survivability but quality of life as well. **RESULTS:** The data of the research illustrates that sunitinib usage as a first-line drug for mRCC patients provides a significant health improvement in terms of PFS and OS, expressed in ICER index, equal to 3,742,060 rub and 955 451 for a saved life year, and ICUR index, equal to 6,787,955 rub and 2,912,714 rub for QALY in comparison with IFN-α and sorafenib respectively. High values of these indexes are mainly caused by high cost of sunitinib and relatively low cost of healthcare resources in Russian Federation. In comparison with bevacizumab with IFN-α, sunitinib is dominant, providing better efficacy with lower cost. **CONCLUSIONS:** These results suggest that sunitinib is a cost-effective alternative to sorafenib, bevacizumab with IFN-α, and sorafenib as a first-line treatment of mRCC.

PCN81

HEALTH RELATED QUALITY OF LIFE, DIRECT MEDICAL, NON-MEDICAL, AND INDIRECT COST ANALYSIS OF STAGE III COLORECTAL CANCER PATIENTS RECEIVING DIFFERENT ADJUVANT CHEMOTHERAPY TREATMENTS IN TAIWAN

Chen HH[1], Chen WT[2], Lee HHC[3], Lin JK[4], Chou YH[5], Yang MC[6], Tan EC[6], Lin EIC[7]
[1]*Chang Guang Memorial Hospital, Kaohsiung Medical Center, Kaohsiung, Taiwan,* [2]*China Medical University Hospital, Taichung, Taiwan,* [3]*Cathy General Hospital, Taipei, Taiwan,* [4]*Taipei Veterans General Hospital, Taipei, Taiwan,* [5]*Shin Kong Wu Ho-Su Memorial Hospital, Taipei, Taiwan,* [6]*National Taiwan University, Taipei, Taiwan,* [7]*Roche, Taipei, Taiwan*

OBJECTIVES: To evaluate the health-related quality of life (HRQOL) and to compare direct medical, non-medical and indirect cost of stage III colorectal cancer(CRC) patients receiving either capecitabine-based or 5-FU/LV-based adjuvant treatments from societal perspective. **METHODS:** An observational follow-up study to collect HRQOL and cost data from stage III CRC patients were conducted in 12 hospitals from 2008 to 2010. A total of 535 patients were invited to complete questionnaires during the study period: at study baseline (Q0), at 3 months after the initial adjuvant treatment (Q3), and at 1 month after treatment had finished (Q7) using the EORTC QLQ-C30 and QLQCR-38 questionnaires. Cost data were obtained from National Health Insurance Research Database (NHIRD), patient questionnaire (Q3) and productivities loss from Manpower Utilization Survey. 66% of patients completed the questionnaire as per protocol and their data were the basis for further analysis. Propensity score matching (PSM) method was used to reduce selection bias and to avoid endogenous problems by matching variables, i.e. age, gender, location of tumor, marital status, education, work and the number of comorbidities between two groups. After PSM, a total of 239 patients were analyzed. **RESULTS:** In capecitabine-based treatment, Physical, Role, Emotional, Social, Global Health status, Body Image, Future perspective Functioning, Fatigue, Pain, Diarrhea, Stoma-related problem, and Weight loss Symptoms were all improved from Q0 to Q3 and Q0 to Q7. In 5-FU/LV-based treatment, Physical, Role, Social, Global health status Functioning, GI tract and Weight loss Symptoms also improved. Total direct medical, direct non-medical, and indirect cost of capecitabine-based and 5-FU/LV-based treatment were NT$29,452 (USD $982) and NT$55,200 (USD $1,840), respectively. **CONCLUSIONS:** This real-life study shows that adjuvant chemotherapy has no negative impact on HRQOL during study period. Capecitabine-based treatment performs better in most functioning aspects of HRQOL and is cost-saving in direct and indirect resources utilization from societal perspective.

PCN82

PHARMACOECONOMICAL EVALUATION OF MULTIPLE MIELOMA TREATMENT WITH LENALIDOMIDE IN THE RUSSIAN FEDERATION

Yagudina R, Kulikov A, Misikova B
I.M. Sechenov First Moscow State Medical University, Moscow, Russia

OBJECTIVES: To assess the cost-effectivness of lenalidomide in treatment of the second and third lines of multiple myeloma in the Russian Federation. **METHODS:** We developed an economic model of multiple myeloma disease to calculate the cost of diagnosis and treatment of second and third-line therapy of lenalidomide and bortezomib. The efficacy of drugs (time to progression- TTP) was obtained from clinical trials: MM - 009/-010 for lenalidomide; APEX for bortezomib. TTP for lenalidomide was 21.2 months and for bortezomib - 16.4 months. Medical care costs were estimated from the standard of multiple myeloma treatment, which was developed and published by Ministry of public health. **RESULTS:** A CER of lenalidomide in the second line therapy was 468,110,84 RUB (11,529,82 €) which is lower then use of bortezomib in the second line therapy 605 118,89 RUB (14,904,4 €). **CONCLUSIONS:** Application of lenalidomide in second-line therapy of multiple myeloma is dominated alternative of treatment.

PCN83

NOVEL TARGETED DRUG THERAPIES IN THE CANCER SETTING: A DESCRIPTIVE COMPARISON OF EFFICACY AND COST

Dranitsaris G[1], Kaura S[2]
[1]*Augmentium Pharma Consulting, Toronto, ON, Canada,* [2]*Celgene Corporation, Summit, NJ, USA*

OBJECTIVES: For many years, the backbone of cancer treatment has been the use of cytotoxic agents. There has been an emergence of new drugs, however, that are more specific to the target. Some of these agents have resulted in a prolongation of survival and even clinical cures in some cancers. In order to compare and contrast the costs and benefits of these new drug therapies, a descriptive evaluation across seven major tumour types was undertaken. **METHODS:** A literature search was conducted from 2000 to 2011 to identify randomized trials of novel therapies in breast, lung, colorectal, kidney, lymphoma, multiple myeloma and chronic myelogenous leukemia. Clinical outcomes in terms of progression free (PFS) and overall survival (OS) benefit were extracted. Economic data in terms of cost per month of therapy was obtained from a U.S. cancer clinic. **RESULTS:** Approximately 22 novel therapies were approved across the seven cancers. Four of the 22 (18%) were used with a curative intent while the remainder were used in the palliative setting (n=18). Ten of these 18 (56%) latter agents also demonstrated an OS benefit. The median month cost for novel therapies used with a curative intent and those with a survival benefit in the palliative setting were $5450 and $6450 respectively. In contrast, the median monthly cost for drugs that did not offer either of these benefits was $7900. Of the agents identified, imatinib, lenalidomide, rituximab and trastuzumab provided the greatest magnitude of benefit for both PFS and OS and would be considered major clinical advances. **CONCLUSIONS:** Approximately 64% of novel drugs approved over the past 11 years are used with a curative intent or provide a survival benefit in the palliative care setting. The monthly cost for agents not providing these benefits, however, was higher, indicating a disconnect between efficacy and cost.

PCN84

ECONOMIC EVALUATION OF THE USE OF CAPECITABINE AS FIRST-LINE TREATMENT OF METASTATIC COLORECTAL CANCER IN MEXICO

Lechuga D[1], Alva M[1], Leyva V[2], Salinas GE[3]
[1]*Roche Mexico, Mexico City, Mexico,* [2]*IMS Health Consulting Group, Mexico, Mexico, Mexico,* [3]*Hospital Infantil de México Federico Gómez, Secretaría de Salud, Mexico, D.F., Mexico*

OBJECTIVES: To identify which is the chemotherapy scheme alternative that minimizes costs in the 1st line treatment of Metastatic Colorectal Cancer (mCRC) in Mexico. **METHODS:** Cost minimization comparing different chemotherapy schemes for mCRC: XELOX (Capecitabine+Oxaliplatin), FOLFOX-4 (Oxaliplatin+Fluorouracil+folinic acid), FOLFOX-6 (Oxaliplatin+ Fluorouracil+ folinic acid) and FOLFIRI (Irinotecan+Fluorouracil+folinic acid). It was performed a